

[CLAIMS]

- 1 1. A feline onychectomy surgical method using a laser
- 2 cutting instrument, the method comprising:
- 3 (a) forming a first circumferential incision in the
- 4 epidermis near the edge of the ungual crest of the claw,
- 5 thereby severing at least some of the epidermis from the
- 6 ungual crest;
- 7 (b) applying cranial traction to the epidermis severed
- 8 from the ungual crest to displace the distal edge of the
- 9 epithelium cranially;
- 10 (c) incising the extensor tendon near its insertion on
- 11 the ungual crest;
- 12 (d) incising the synovium of the PII-PIII joint;

- 13 (e) applying traction to the claw in the palmar
- 14 direction for disarticulating the PII-PIII joint;
- 15 (f) ablating the medial and lateral collateral
- 16 ligaments;
- 17 (g) incising the digital flexor tendon; and
- 18 (h) incising the subcutaneous tissues of the pad of
- 19 the second phalanx.

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1 2. The surgical method in accordance with claim 1, wherein
2 the steps of incising and ablating further comprise
3 directing the laser beam in a substantially palmar
4 direction from a laser beam source positioned substantially
5 dorsally of the tissue being incised.

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1 3. The surgical method in accordance with claim 2, further
2 comprising forming a second circumferential incision in the
3 epidermis cranial to the first circumferential incision,
4 thereby severing at least some of the subcutaneous fascia
5 from the ungual crest.

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1 4. The surgical method in accordance with claim 3, wherein
2 the second circumferential incision is formed about three
3 millimeters cranial to the first circumferential incision.

1 5. The surgical method in accordance with claim 4, further
2 comprising applying cranial traction to the epidermis
3 severed from the ungual crest for covering the onychectomy
4 site.

1 6. A feline onychectomy surgical method using a laser
2 cutting instrument, the method comprising:
3 (a) forming a first circumferential incision with the
4 laser in the epidermis at the edge of the ungual crest of
5 the feline's claw, thereby severing at least some of the
6 epidermis from the ungual crest; and then
7 (b) applying cranial traction to the epidermis severed
8 from the ungual crest to displace the distal edge of the
9 epidermis cranially; and then
10 (c) forming a second circumferential incision in the
11 epidermis about 3 millimeters cranial to the first

12 circumferential incision, thereby severing at least some of
13 the subcutaneous fascia from the ungual crest; and then
14 (d) incising the extensor tendon near its insertion on
15 the ungual crest by directing the laser beam in a
16 substantially palmar direction from a laser beam source
17 positioned substantially dorsally of the extensor tendon;
18 and then
19 (e) incising the synovium of the PII-PIII joint; and
20 then
21 (f) applying traction to the claw in the palmar
22 direction for disarticulating the PII-PIII joint; and then
23 (g) ablating the medial and lateral collateral
24 ligaments by directing the laser beam in a substantially
25 palmar direction from the source positioned substantially
26 dorsally of the ligaments; and then
27 (h) incising the digital flexor tendon by directing
28 the laser beam in a substantially palmar direction from the
29 source positioned substantially dorsally of the flexor
30 tendon; and then
31 (i) incising the subcutaneous tissues of the pad of
32 the second phalanx by directing the laser beam in a

33 substantially palmar direction from the source positioned
34 substantially dorsally of the subcutaneous tissues of the
35 pad of the second phalanx; and then
36 (j) applying palmar traction to the epidermis severed
37 from the ungual crest for covering the onychectomy site.

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